a light source emitting at least one laser beam;

a waveguide support capable of supporting total internal reflection comprising a top surface, a bottom surface and at least one edge surface, wherein said biological molecules are affixed to said top surface;

means for directing said at least one laser beam into said edge of said waveguide support; and

a charge couple device for detecting emission spectra of said biological molecules.

Claim 19. (Amended) The device of claim 18, further comprising a transparent hexahedron located between said light source and said waveguide support,

wherein said transparent hexahedron occupies the same plane as said at least one laser beam and revolves around an axis perpendicular to said at least one laser beam and directs said at least one laser beam into said edge of said waveguide support to effect total internal reflection.

Claim 20. (Amended) The device of claim 18, further comprising an optical wedge located between said light source and said waveguide support and revolving around an axis approximating said at least one laser beam,

wherein said optical wedge directs said at least one laser beam into said waveguide support to effect total internal reflection.

Claim 21. (Amended) The device of claim 18, further comprising a cylindrical lens located between said light source and said waveguide support and moving perpendicular to the plane of said at least one laser beam,

wherein said optical wedge focuses said at least one laser beam into a shape smaller than said edge of said waveguide support to effect total internal reflection.

Claim 22. (Amended) The device of claim 18, wherein said means for directing said at least one laser beam comprises a mirror located adjacent to said waveguide support,

wherein said mirror directs said at least one laser beam into said edge of said waveguide support to effect total internal reflection.

Claim 23. (Amended) The device of claim 18, further comprising a diffraction grating located between said light source and said waveguide support,

wherein said diffraction grating selectively allows light of a specific wavelength to excite said fluorophore linked to said biological molecules.

Claim 24. (Amended) The device of claim 18, further comprising an optical prism located adjacent to said waveguide support,

wherein said optical prism directs said at least one laser beam into said edge of said waveguide support to effect total internal reflection.

Claim 25. (Amended) The device of claim 24, further comprising a transparent liquid located between said waveguide support and said optical prism and possesses a refractive index about equal to the refractive indices possessed by said waveguide support and said optical prism,

wherein said transparent liquid directs said at least one laser beam into said edge of said waveguide support to effect total internal reflection.

Claim 26. (Amended) The device of claim 18, further comprising bandpass filters located between said waveguide support and said charge coupled device,

wherein said bandpass filters are positioned to receive emitted light and separate emission spectra from said fluorophore.

Claim 27. (Amended) A device for receiving a laser beam from a light source used in the excitation, detection, and analysis of biological molecules linked to a fluorophore comprising:

a) a light source emitting at least one laser beam;

b) a waveguide support capable of supporting total internal reflection comprising a top surface, a bottom surface and at least one edge surface, wherein said biological molecules are affixed to said top surface;

c) a transparent hexahedron located adjacent to said light source, occupying the same plane as said at least one laser beam, and revolving around an axis perpendicular to said at least one laser beam;

b) an optical wedge located adjacent to said transparent hexahedron and revolving around an axis approximating said at least one laser beam;

c) a cylindrical lens located adjacent to said optical wedge, and moving perpendicular to the plane of the at least one laser beam, wherein said cylindrical lens focuses said at least one laser beam into a shape smaller than said edge of said waveguide support; and

d) a mirror located adjacent to said cylindrical lens;

wherein said transparent hexahedron, optical wedge, cylindrical lens, and mirror direct said at least one laser beam into said edge of said waveguide support to effect total internal reflection.

Please add the following claims:

--30. The device of claim 1, wherein said at least one laser beam is laser beams of four different wavelengths.--

--31. The device of claim 27, wherein said at least one laser beam is laser beams of four different wavelengths.--

--32. The device of claim 30, wherein said laser beams are used with the Arrayed Primer Extension (APEX) assay.--

--33. The device of claim 31, wherein said laser beams are used with the Arrayed Primer Extension (APEX) assay.--

--34. A method for analyzing a nucleic acid sequence in an Arrayed Primer Extension (APEX assay) which comprises exciting and detecting the fluorophore with the device of claim 18.--

--35. A method for analyzing a nucleic acid sequence in an Arrayed Primer Extension (APEX assay) which comprises exciting and detecting four spectrally distinct fluorophores sequentially with the device of claim 30.--